

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE MODIFICATION OF AN EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF US 40 AND MD 24 RAMPS "C" AND "D" IN HARFORD COUNTY. US 40 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

CONTROLLER OPERATION

THE CONTROLLER CURRENTLY OPERATES IN A FOUR PHASE, FULL-TRAFFIC-ACTUATED MODE WITH AN EXCLUSIVE LEFT TURN PHASE FOR EASTBOUND US 40. FOR THIS PROJECT THE SIDE STREET PHASES ARE BEING SPLIT AND AN EXCLUSIVE LEFT TURN PHASE IS BEING ADDED TO WESTBOUND US 40.

PHASE CHART

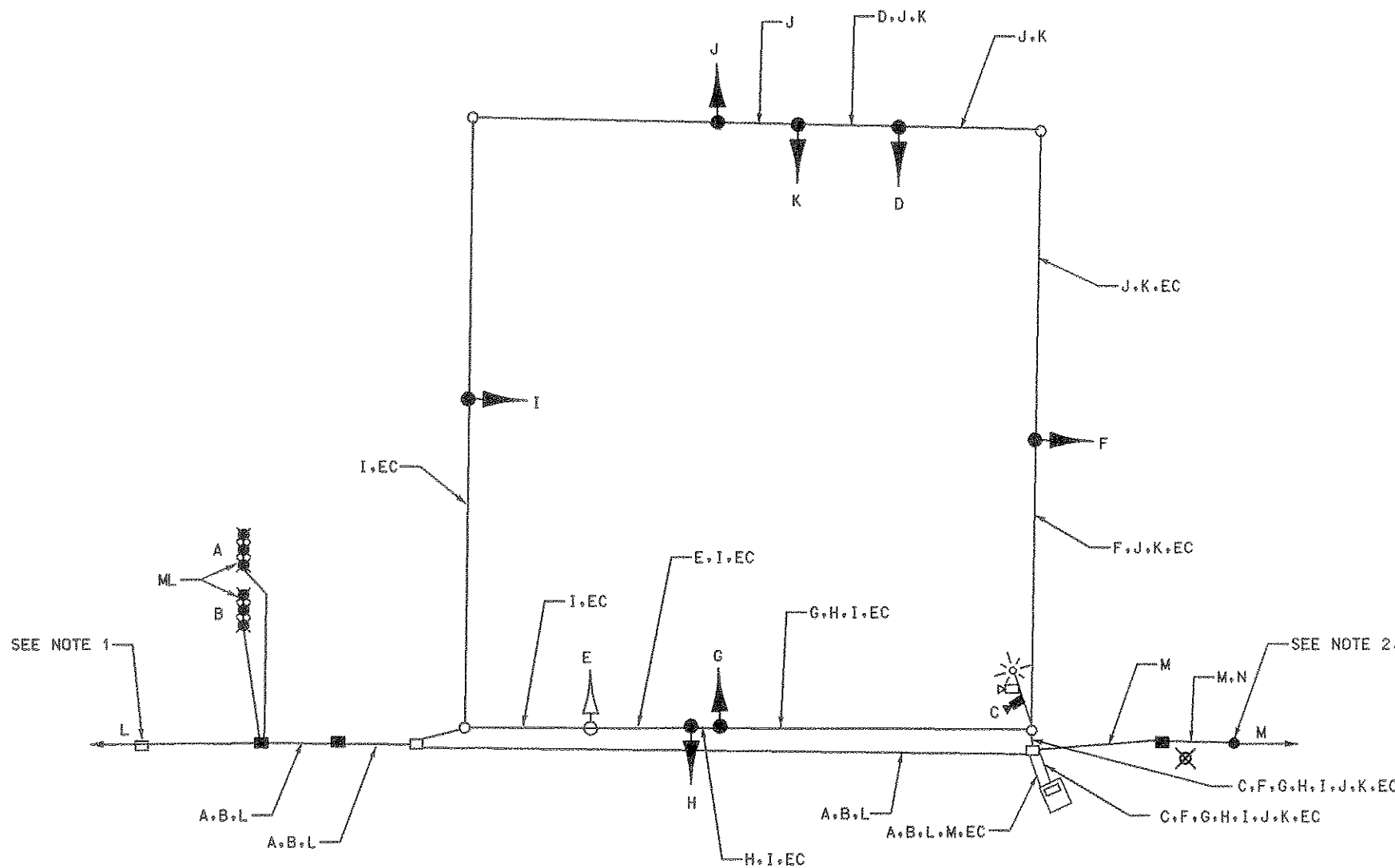
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	PH	PH	R	R	PH	PH	R	R	PH	R	R	PH	R	R
	PH	PH	G	G	PH	PH	G	G	PH	R	R	PH	R	R
PHASE 1 & 5	<G-	<G-	R	R	<G-	<G-	R	R	R	R	R	R	R	R
1 & 5 CHANGE	PHASE 1 & 5 MAY CHANGE TO 1 & 6, 2 & 5, OR 2 & 4													
PHASE 1 & 6	<G-	<G-	G	G	<R-	<R-	R	R	R	R	R	R	R	R
1 & 6 CHANGE	<Y-	<Y-	G	G	<R-	<R-	R	R	R	R	R	R	R	R
PHASE 2 & 5	<R-	<R-	R	R	<G-	<G-	G	G	R	R	R	R	R	R
2 & 5 CHANGE	<R-	<R-	R	R	<Y-	<Y-	G	G	R	R	R	R	R	R
PHASE 2 & 6	<R-	<R-	G	G	<R-	<R-	G	G	R	R	R	R	R	R
2 & 6 CHANGE	<R-	<R-	Y	Y	<R-	<R-	Y	Y	R	R	R	R	R	R
PHASE 3	<R-	<R-	R	R	<R-	<R-	R	R	G	G	R	R	R	R
3 CHANGE	<R-	<R-	R	R	<R-	<R-	R	R	Y	Y	R	R	R	R
PHASE 4	<R-	<R-	R	R	<R-	<R-	R	R	R	R	G	G	G	G
4 CHANGE	<R-	<R-	R	R	<R-	<R-	R	R	R	R	G	Y	Y	Y
FLASHING OPERATION	FL/RA	FL/RA	FL/Y	FL/Y	FL/RA	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR. ALL EQUIPMENT SHALL HAVE CATALOG CUTS SUBMITTED TO OOTS FOR APPROVAL PRIOR TO INSTALLATION.

ITEM NO.	QUANTITY	DESCRIPTION
1001	LS	MAINTENANCE OF TRAFFIC
2002	1 CY	TEST PIT EXCAVATION
5001	1 EA	FURNISH AND INSTALL HEAT APPLIED PERMANENT THERMOPLASTIC PAVEMENT MARKING ARROW
5005	75 LF	FURNISH AND INSTALL 24 IN. WHITE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING
8001	1 EA	FURNISH AND INSTALL 250 FT. VIDEO CABLE TO CONTROLLER
8004	2 EA	ADJUST EXISTING HANDHOLE TO GRADE INCLUDING COLLAR
8007	1 EA	FURNISH AND INSTALL 12 IN. 0 GAUGE 30 FT. STRAIN POLE
8011	19 EA	FURNISH AND INSTALL 12 IN. VEHICULAR SIGNAL HEAD SECTION
8019	6 EA	FURNISH AND INSTALL 8 IN. VEHICULAR SIGNAL HEAD SECTION
8028	2 EA	FURNISH AND INSTALL MICRO PROBE SET 1000 FT. LEAD-IN
8048	LS	REMOVE AND DISPOSE OF MATERIAL AND EQUIPMENT
8049	1 EA	VIDEO DETECTION CAMERA
8052	130 LF	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT - BORED
8053	700 LF	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT - TRENCHED
8057	3 CY	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION STRUCTURE
8060	140 LF	FURNISH AND INSTALL NO. 6 STRANDED BARE COPPER GROUND WIRE
8068	20 LF	FURNISH AND INSTALL 1 IN. LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR WIRE SLEEVE
8072	4 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8080	1 EA	FURNISH AND INSTALL GROUND ROD 3/4 IN. X 10 FT. DIAMETER
8084	50 LF	FURNISH AND INSTALL ELECTRICAL CABLE 5-CONDUCTOR (NO. 14 A.W.G.)
8085	1100 LF	FURNISH AND INSTALL ELECTRICAL CABLE 7-CONDUCTOR (NO. 14 A.W.G.)
8088	65 LF	FURNISH AND INSTALL SAW CUT FOR SIGNAL LOOP DETECTOR
---	1 EA	FURNISH AND INSTALL R3-5(L) SIGN (30" X 36") SPAN WIRE MOUNT
---	1 EA	FURNISH AND INSTALL R3-6 SIGN (36" X 36") SPAN WIRE MOUNT
---	1 EA	FURNISH AND INSTALL SHIELD ASSEMBLY (WEST, US 40, ARROW) 36" X 75" - STRAIN POLE MOUNT
---	1 EA	FURNISH AND INSTALL SHIELD ASSEMBLY (EAST, US 40, ARROW) 24" X 51" - STRIAN POLE MOUNT
---	1300 LF	REMOVE AND REINSTALL EXISTING CABLE

WIRING DIAGRAM



- NOTE: 1. DISCONNECT EXISTING INTERCONNECT CABLE FROM THE CONTROLLER AND REMOVE TO THIS HANDHOLE. RE-INSTALL INTO NEW CONDUIT TO THE CONTROLLER.
2. DISCONNECT EXISTING INTERCONNECT CABLE FROM THE CONTROLLER AND REMOVE TO THIS STRAIN POLE. RE-INSTALL ONTO NEW STRAIN POLE AND THROUGH NEW CONDUIT TO THE CONTROLLER.

WIRING KEY

- A-B MICRO-LOOP PROBE
C VIDEO DETECTION CAMERA CABLE
D-E 5 CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
F-K 7 CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
L-M INTERCONNECT CABLE
N STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
ML MICRO-LOOP PROBE
EC EXISTING CABLE
X GROUND ROD

EQUIPMENT LIST "A"

A. APPROVED SHA EQUIPMENT TO BE PURCHASED BY THE DEVELOPER AND INSTALLED BY THE CONTRACTOR. ALL EQUIPMENT IN THIS LIST SHALL HAVE CATALOG CUTS SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION.

ITEM NO.	QUANTITY	DESCRIPTION
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NONE

CONTACT PERSONS FOR DISTRICT 4 ARE AS FOLLOWS:

MR. DAVID MALKOWSKI DISTRICT ENGINEER (410) 321-2810	MR. JOSEPH MCMAHON ASSISTANT DISTRICT ENGINEER - UTILITIES (410) 321-2841
MR. RANDALL SCOTT ASSISTANT DISTRICT ENGINEER - TRAFFIC (410) 321-2781	MR. DAVE RAMSEY ASSISTANT DISTRICT ENGINEER - MAINTENANCE (410) 321-2761
MR. RICHARD DAFF SR. CHIEF, TRAFFIC OPERATIONS (410) 787-7630	MR. EUGENE BAILEY TEAM LEADER SIGN OPERATIONS (410) 787-7676
MR. ROBERT SNYDER ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS (410) 787-7631	MR. DAVID SCHWARTZ SUPPLY OFFICE IV (SIGNAL SHOP WAREHOUSE) (410) 787-7668

CONTACTS FOR OFFICE OF TRAFFIC AND SAFETY

MR. ED RODENHIZER
TEAM LEADER SIGNAL OPERATIONS
(410) 787-7652

EQUIPMENT LIST "C"

C. EXISTING EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE STATE HIGHWAY ADMINISTRATION, 7491 CONNELLEY DRIVE, HANOVER, MARYLAND 21076. THE CONTRACTOR SHALL NOTIFY THE SHA AT (410) 787-7652 AT LEAST THREE DAYS IN ADVANCE OF DELIVERY.

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NONE

NOTE: ALL SIGNAL EQUIPMENT AND MATERIAL TO BE REMOVED NOT LISTED ABOVE SHALL BECOME THE PROPERTY OF THE CONTRACTOR

TRAFFIC **C**ONCEPTS, INC.

Brightview Business Center
325 Gambrills Road
Suite E
Gambrills, MD 21054
(410) 923-7101



MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety

TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION SHEET

US 40 AND MD 24 RAMP "C" AND "D"

DRAWN BY: M. HOWELL	F.A.P. NO.	TS NO.	
CHECKED BY: T. ZAYDEL	S.H.A. NO.	3164B GI	
SCALE: NONE	COUNTY: HARFORD	T.I.M.S. NO.	
DATE: 10-9-01	LOG MILE: I2004004.63		SHEET NO. 2 OF 2